

AMENDMENTS TO THE CLAIMS:

Claims 1-13 (cancelled).

Claim 14 (Currently Amended) A method for determining a manner of classifying a data sample in one of a number of predetermined classes, said method comprising:

associating a plurality of data classifiers in a decision fusion application comprising said data sample, wherein said classifiers indicate a manner of classifying said data sample in said one of a number of predetermined classes;

computing a weight value for each of a said plurality of data classifiers;

calculating for each of said predetermined classes a weighted summation across said classifiers of a likelihood that the data sample belongs to a particular class, weighted by said weight value;

designating said data sample as belonging to said particular class for which said weighted summation is greatest in value;

assigning ~~accuracy~~ confidence values for each classifier in said decision fusion application based on said greatest in value; and

improving a classification accuracy of said decision fusion application based on said ~~accuracy~~ confidence values.

Claim 15 (Currently Amended): The method of claim 14, wherein said weight value for a classifier said each of said plurality of data classifiers comprises a data sample confidence

component, wherein said data sample confidence component includes a linear combination of an order statistic.

Claim 16 (Currently Amended): The method of claim 15, wherein said linear combination is defined by a log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample.

Claim 17 (Currently Amended): The method of claim 15, wherein said linear combination for a particular data sample comprises a difference between a most likely and a second most likely class associated with a particular classifier.

Claim 18 (Currently Amended): The method of claim 16, wherein the weight value comprises said data sample confidence component equaling said log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample; and a cumulative component comprising a mean of said data sample confidence component over a plurality of samples.

Claim 19 (Currently Amended): The method of claim 18, wherein said cumulative component is successively updated with said data sample confidence component of each said data sample.

Claim 20 (Currently Amended): A program storage device readable by computer, tangibly embodying a program of instructions executable by said computer to perform a method for

determining a manner of classifying a data sample in one of a number of predetermined classes, said method comprising:

associating a plurality of data classifiers data classifiers in a decision fusion application comprising said data sample, wherein said classifiers indicate a manner of classifying said data sample in said one of a number of predetermined classes;

computing a weight value for each of a said plurality of data classifiers;

calculating for each of said predetermined classes a weighted summation across said classifiers of a likelihood that the data sample belongs to a particular class, weighted by said weight value;

designating said data sample as belonging to said particular class for which said weighted summation is greatest in value;

assigning ~~accuracy~~-confidence values for each classifier in said decision fusion application based on said greatest in value; and

improving a classification accuracy of said decision fusion application based on said ~~accuracy~~ confidence values.

Claim 21 (Currently Amended): The program storage device of claim 20, wherein said weight value for a classifier said each of said plurality of data classifiers comprises a data sample confidence component, wherein said data sample confidence component includes a linear combination of an order statistic.

Claim 22 (Currently Amended): The program storage device of claim 21, wherein said linear combination is defined by a log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample.

Claim 23 (Currently Amended): The program storage device of claim 21, wherein said linear combination for a particular data sample comprises a difference between a most likely and a second most likely class associated with a particular classifier.

Claim 24 (Currently Amended): The program storage device of claim 22, wherein the weight value comprises said data sample confidence component equaling said log-likelihood of respective predetermined classes for said plurality of data classifiers corresponding to said data sample, and a cumulative component comprising a mean of said data sample confidence component over a plurality of data samples.

Claim 25 (Currently Amended): The program storage device of claim 24, wherein said cumulative component is successively updated with said data sample confidence component of each said data sample.

Claim 26 (Currently Amended): An apparatus for determining a manner of classifying a data sample in one of a number of predetermined classes, said apparatus comprising:

means for associating a plurality of data classifiers data classifiers in a decision fusion application comprising said data sample, wherein said classifiers indicate a manner of classifying said data sample in said one of a number of predetermined classes;

means for computing a weight value for each of a said plurality of data classifiers;

means for calculating for each of said predetermined classes a weighted summation across said classifiers of a likelihood that the data sample belongs to a particular class, weighted by said weight value;

means for designating said data sample as belonging to said particular class for which said weighted summation is greatest in value;

means for assigning ~~accuracy~~ confidence values for each classifier in said decision fusion application based on said greatest in value; and

means for improving a classification accuracy of said decision fusion application based on said ~~accuracy~~ confidence values.

Claim 27 (Currently Amended): The method of claim 14, wherein said plurality of data classifiers comprise audio and video classifiers, and wherein said decision fusion application comprises an audiovisual speech recognition application.

Claim 28 (Previously Presented): The method of claim 14, wherein said weighted summation comprises an overall confidence component across said predetermined classes.

Claim 29 (Currently Amended): The method of claim 28, further comprising determining a relative confidence level relating to an accuracy of said plurality of data classifiers for each sample in said decision fusion application based on said a data sample confidence component and said overall confidence component.

Claim 30 (Currently Amended): The program storage device of claim 20, wherein said plurality of data classifiers comprise audio and video classifiers, and wherein said decision fusion application comprises an audiovisual speech recognition application.

Claim 31 (Previously Presented): The program storage device of claim 20, wherein said weighted summation comprises an overall confidence component across said predetermined classes.

Claim 32 (Currently Amended): The method of claim 31, further comprising determining a relative confidence level relating to an accuracy of said plurality of data classifiers for each data sample in said decision fusion application based on said a data sample confidence component and said overall confidence component.